(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 7 April 2005 (07.04.2005)

(10) International Publication Number WO 2005/031323 A1

(51) International Patent Classification7: 21/27, G01J 3/51, 5/60

G01N 21/35,

(21) International Application Number:

PCT/AU2004/001338

(22) International Filing Date:

29 September 2004 (29.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003905315

29 September 2003 (29.09.2003) AU 2004900214 16 January 2004 (16.01.2004)

(71) Applicant (for all designated States except US): COM-MONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION [AU/AU]; Limestone Avenue, CAMPBELL, Australian Capital Territory 2612 (AU).

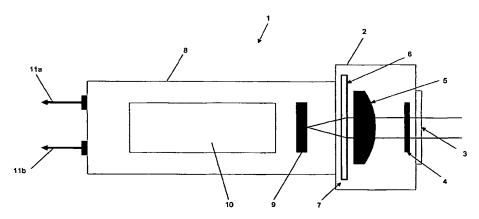
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BERNADO, Cirilo

[US/AU]; 58 Kearney Drive, ASPENDALE GARDENS, VICTORIA 3195 (AU). PRATA, Alfredo Jose [AU/AU]; 116 Humphries Road, MOUNT ELIZA, VICTORIA 3930 (AU).

- (74) Agent: GRIFFITH HACK; 509 St Kilda Road, MEL-BOURNE, Victoria 3004 (AU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: AN INFRARED DETECTION APPARATUS



(57) Abstract: There is disclosed an infrared detection apparatus (130) for detecting an adverse atmospheric condition comprising a plurality of filters corresponding to different ones of a plurality of wavelengths and at least including filters that enable the adverse atmospheric condition to be detected, an infrared array (9), said infrared array producing signals representative of infrared radiation reaching said array from a field of view, radiation control means (47) for controlling the infrared radiation received by the infrared array, the radiation control means including means (7) for changing the filters so that said infrared array (9) can produce wavelength signals representative of infrared radiation from each of said wavelengths corresponding to the adverse atmospheric condition to be detected, and means (4) for enabling said infrared array to produce calibration signals for each wavelength signal, calibration means (140) for performing a calibration of each wavelength signal to correct for radiation from the infrared detection apparatus on the basis of at least the corresponding calibration signal to thereby produce a calibrated wavelength signal representative of radiation from the field of view, and output means (140) for producing an output indicative of the presence of the adverse atmospheric condition in the field of view based on the calibrated wavelength signals.



WO 2005/031323 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.